

03451500 FRENCH BROAD RIVER AT ASHEVILLE, NC

LOCATION.--Lat 35°36'32", long 82°34'41", Buncombe County, Hydrologic Unit 06010105, on right bank 27 ft upstream from Pearson Bridge (Secondary Road 1348) at Asheville, 1.4 mi downstream of bridge on U.S. Highways 19 and 23, 3.2 mi downstream of Swannanoa River, and at mile 145.8.

DRAINAGE AREA.--945 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1895 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 823: Drainage area. WSP 1306: 1895-1909, 1901(M), 1914-15(M), 1917(M), 1920-22(M),

GAGE.--Water-stage recorder. Datum of gage is 1,950.28 ft above NGVD of 1929. Sept. 17, 1895, to Dec. 31, 1901, nonrecording gage at present site at different datum. Mar. 19, 1903, to July 15, 1916, and Jan. 1, 1917, to Sept. 30, 1922, nonrecording gage at Smith Bridge 1.5 mi upstream at datum 1961.80 ft. Oct. 1, 1922, to Aug. 9, 1930, nonrecording gage at present site and datum. Satellite and telephone telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Many small diversions from tributaries upstream from station for water supply. Diversions by City of Asheville and others from upstream tributaries in the Swannanoa River basin (station 03451000) totaled about 27.4 ft³/s and 34.9 ft³/s was discharged 4 mi downstream from station as treated effluent. Slight diurnal fluctuation and occasional slight regulation at low flow caused by power plant 46 mi upstream and small reservoirs upstream from station. Maximum discharge for period of record, from rating curve extended above 43,000 ft³/s, by logarithmic plotting; maximum gage height, 23.10, from floodmarks. Minimum discharge for period of record also occurred Sept. 14, 2002.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage observed since at least 1791, that of July 16, 1916, and flood of June 17, 1876, reached a stage of 18 ft, from studies by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges associated with the remnants of Hurricanes Frances and Ivan.

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sep 8	1615	43,100	14.55	Sep 17	0930	30,100	11.57

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,530	1,430	2,440	2,050	1,430	2,080	2,220	1,650	1,850	2,060	2,640	1,960
2	1,470	1,390	2,250	2,000	1,430	2,060	1,840	1,950	1,470	2,090	2,370	4,550
3	1,410	1,350	2,120	1,960	2,360	2,090	1,700	2,470	1,310	2,310	2,150	4,060
4	1,380	1,320	2,130	1,940	2,660	2,070	1,640	2,070	1,660	2,140	2,000	2,340
5	1,350	1,470	2,570	1,960	2,150	2,030	1,580	1,800	1,610	2,040	1,610	1,730
6	1,320	3,120	2,590	2,080	6,710	2,100	1,530	1,700	1,360	1,730	1,460	1,470
7	1,340	3,450	2,340	1,940	10,100	2,230	1,500	1,610	1,250	1,580	1,280	5,040
8	1,300	2,500	2,150	1,810	8,530	2,100	1,500	1,520	1,250	1,490	1,130	34,700
9	1,560	2,080	2,070	1,810	6,370	1,980	1,490	1,610	1,270	1,400	1,070	33,800
10	1,840	1,850	3,010	1,790	3,780	1,950	1,440	1,720	1,280	1,440	1,000	25,600
11	1,750	1,730	6,130	1,730	3,290	1,900	1,450	1,590	1,390	1,370	998	15,300
12	1,830	1,680	5,650	1,700	3,280	1,840	1,630	1,470	1,210	1,880	1,520	9,710
13	1,640	1,590	3,940	1,660	3,540	1,800	3,690	1,610	2,390	1,660	1,560	6,080
14	1,500	1,480	3,710	1,640	3,120	1,750	4,900	2,290	1,710	1,500	1,220	3,850
15	1,440	1,430	3,670	1,620	2,970	1,790	3,320	2,530	3,270	1,290	1,040	3,790
16	1,380	1,410	3,190	1,590	3,050	1,940	2,590	1,880	4,420	1,130	969	3,550
17	1,340	1,410	3,260	1,560	2,830	1,880	2,290	1,860	3,080	1,070	965	25,300
18	1,310	1,420	3,260	1,600	2,670	1,910	2,100	2,040	2,480	1,450	1,260	24,300
19	1,290	8,850	2,950	1,710	2,580	e2,100	1,970	1,970	1,870	1,250	958	19,900
20	1,260	9,110	2,730	1,600	2,500	e1,900	1,880	1,870	1,600	1,190	944	13,400
21	1,240	8,130	2,550	1,530	2,460	e1,850	1,810	1,870	1,480	1,060	932	9,020
22	1,220	6,730	2,450	1,500	2,360	1,750	1,730	1,820	2,350	1,040	952	6,590
23	1,200	3,550	2,390	1,470	2,260	1,680	1,670	1,960	3,600	1,050	894	4,750
24	1,180	2,920	2,570	1,460	2,220	1,650	1,620	1,860	2,330	985	1,260	4,100
25	1,170	2,950	2,570	1,480	2,200	1,620	1,580	1,700	2,050	1,310	1,120	3,720
26	1,350	2,670	2,370	1,610	2,140	1,600	2,020	1,540	2,960	1,300	1,090	3,460
27	2,810	2,460	2,260	1,600	2,210	1,590	2,380	1,490	2,960	1,810	955	3,350
28	2,540	2,490	2,160	1,650	2,260	1,570	1,950	1,390	2,250	2,650	1,130	11,500
29	1,860	3,060	2,100	1,530	2,150	1,540	1,700	1,390	2,300	1,760	1,390	10,400
30	1,630	2,700	2,120	1,500	---	1,540	1,630	1,440	1,890	1,770	1,390	9,060
31	1,500	---	2,160	1,470	---	2,010	---	1,940	---	2,850	1,500	---
TOTAL	46,940	87,730	87,860	52,550	95,610	57,900	60,350	55,610	61,900	49,655	40,757	306,380
MEAN	1,514	2,924	2,834	1,695	3,297	1,868	2,012	1,794	2,063	1,602	1,315	10,210
MAX	2,810	9,110	6,130	2,080	10,100	2,230	4,900	2,530	4,420	2,850	2,640	34,700
MIN	1,170	1,320	2,070	1,460	1,430	1,540	1,440	1,390	1,210	985	894	1,470
CFSM	1.60	3.09	3.00	1.79	3.49	1.98	2.13	1.90	2.18	1.69	1.39	10.8
IN.	1.85	3.45	3.46	2.07	3.76	2.28	2.38	2.19	2.44	1.95	1.60	12.06

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1896 - 2004, BY WATER YEAR (WY)

MEAN	1,569	1,627	2,092	2,411	2,663	2,996	2,741	2,190	1,875	1,694	1,676	1,535
MAX	7,025	5,121	5,700	6,068	6,364	7,928	5,705	4,961	5,774	11,500	8,362	10,210
(WY)	(1965)	(1980)	(1915)	(1937)	(1998)	(1899)	(1899)	(1973)	(1909)	(1916)	(1901)	(2004)
MIN	353	507	636	548	1,083	1,037	973	852	547	559	328	346
(WY)	(1955)	(1932)	(1956)	(1956)	(1931)	(1988)	(1986)	(2001)	(1988)	(1986)	(1925)	(1954)

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SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1896 - 2004	
ANNUAL TOTAL	996,510		1,003,242			
ANNUAL MEAN	2,730		2,741		2,086	
HIGHEST ANNUAL MEAN					3,671	1901
LOWEST ANNUAL MEAN					1,004	1988
HIGHEST DAILY MEAN	13,500	May 7	34,700	Sep 8	66,000	Jul 16, 1916
LOWEST DAILY MEAN	1,170	Oct 25	894	Aug 23	215	Sep 13, 2002
ANNUAL SEVEN-DAY MINIMUM	1,220	Oct 19	986	Aug 17	246	Sep 7, 2002
MAXIMUM PEAK FLOW			43,100	Sep 8	110000*	Jul 16, 1916
MAXIMUM PEAK STAGE			14.55	Sep 8	23.10*	Jul 16, 1916
INSTANTANEOUS LOW FLOW			867	Aug 23	215*	Sep 13, 2002
ANNUAL RUNOFF (CFSM)	2.89		2.90		2.21	
ANNUAL RUNOFF (INCHES)	39.23		39.49		30.00	
10 PERCENT EXCEEDS	4,390		3,740		3,640	
50 PERCENT EXCEEDS	2,380		1,850		1,630	
90 PERCENT EXCEEDS	1,400		1,270		769	

* See REMARKS.

e Estimated.

